

**REMARKS**

Claims 1, 2, 6-8, and 10-14 are all the claims pending in the application (claims 11-14 are withdrawn from consideration). Claims 1, 2, 6-8, and 10 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. Claims 1, 2, 6-8, and 10 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Claims 1, 2, 6-8, and 10 are rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Usui et al. (U.S. Patent No. 4,948,774, Usui'774, or U.S. Patent No. 5,026,611, Usui'611) alone or in view of JP 08-141413 (JP'413) and Nonnenmann et al. (U.S. Patent No. 4,248,186).

As a preliminary matter, the specification is objected to for the reasons set forth at the top of page 2 of the present Office Action. Accordingly, Applicant has amended the specification and submits that these amendments obviate the Examiner's objection to the specification.

Also, an Examiner Interview was conducted on July 21, 2005. Comments regarding the Interview are set forth below and Applicant submits that such comments constitute a Statement of Substance of Interview.

**§ 112, First Paragraph, Rejections - Claims 1, 2, 6-8, and 10**

The Examiner rejects claims 1, 2, 6-8, and 10 under 35 U.S.C. § 112, first paragraph, for the reasons set forth on pages 2-3 of the present Office Action.

Specifically, the Examiner appears to believe that the new recitations added in the Amendment dated January 18, 2005, are nowhere disclosed in the specification. At least based

on a reasonable reading of the specification and in view of the non-limiting embodiments shown in Figure 1a, and the non-limiting embodiments on pages 3, 6 and 7 of the present Application, Applicant submits that the amendments of January 18, 2005, in addition to the new amendment to add the terms “melted” and “unmelted,” are clearly supported by the specification, and one skilled in the art would clearly understand that the inventors were in possession of the claimed invention at the time the present application was filed.

For example, on pages 3, 6 and 7 of the specification, a non-limiting embodiment is disclosed where the brazing foil material is wound around an outer periphery of an exhaust gas outlet side or rear side of a core, while the solder-rising preventing groove is positioned on an exhaust gas inlet side or front side of an area for joining the core (last paragraph beginning on pg. 3 and ending on pg. 4). Based on such disclosure, one skilled in the art would recognize that the material and groove are provided on opposite sides, i.e., outlet and inlet, as recited in claim 1. Further on page 7 of the Office Action, the Examiner appears to acknowledge that the brazing material and grooves are provided on opposite sides (“...although the brazing material and the grooves are provided on opposite sides...”).

As further disclosed in the non-limiting embodiments, the brazing material does not rise towards the solder rising preventing groove at the inlet side of the core until melted by *heat treatment* (non-limiting embodiment of pgs. 4 and 7). Since the brazing material is “melted” by the heat treatment, then one skilled in the art would understand that it would have to be “unmelted” before the heat treatment. Thus, the brazing foil material disposed around the outer periphery, before heat treatment, is “unmelted” material. Further, since the brazing material does

not rise toward the grooves until melted, one skilled in the art would clearly understand that the unmelted material is not disposed in the groove, as recited in the claims. As disclosed in MPEP §2163.05, a claim limitation will comply with the written description requirement of 35 U.S.C. § 112, first paragraph, if the limitation is either expressly, *implicitly* or *inherently* supported in the originally filed disclosure (i.e., such that if the recitations are implied or inherent in the specification, the written description requirement is satisfied). Based on the non-limiting disclosure of pages 3, 6 and 7, Applicant submits that one skilled in the art would clearly understand that the claims are well supported by the specification to allow one skilled in the art to understand that the Applicant had possession of the invention at filing.

Regarding claim 10, Applicant submits that similar disclosure as provided above also supports the features of claim 10. In particular, in the non-limiting embodiment on pg. 3, the solder-rising preventing groove is disclosed as being positioned on the exhaust gas inlet side. In such non-limiting embodiment, the solder-rising preventing groove is not disclosed as being provided on both the inlet and outlet sides, but only on the one side or “one end” as recited in claim 10. Applicant further directs the Examiner’s attention to Fig. 1A, where the solder rising preventing groove 19 is only shown on the one end of the cylinder 15.

The above points were discussed during the July 21, 2005 Examiner Interview. As noted on the Interview Summary, the Examiner indicated that she would reconsider her position upon receipt of Applicant’s formal Amendment. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw the rejection.

§ 112, Second Paragraph, Rejections - Claims 1, 2, 6-8, and 10

The Examiner has rejected claims 1, 2, 6-8 and 10 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

In regard to claim 1, Applicant directs the Examiner's attention to the comments provided above in the rejection under 35 U.S.C. § 112, first paragraph. In addition, Applicant submits that the amendments to claim 1 clearly set forth the structural features of the claim.

In regard to claim 10, the Examiner maintains that it is unclear where it is disclosed in the specification that the groove is provided on "only" one end of the cylinder. Applicant directs the Examiner's attention to the comments provided above in the rejection under 35 U.S.C. § 112, first paragraph and to Figure 1A.

§ 103(a) Rejections (Usui'774 or Usui'611 / JP '413/ Nonnenmann) - Claims 1, 2, 6-8, and 10

Claims 1, 2, 6-8, and 10 are rejected over the applied references for the reasons set forth on pages 3-7 of the present Office Action, and Examiner adds a few new arguments in the *Response to Arguments* section of the present Office Action.

The Examiner appears to be unsure of the structural limitations that distinguish the claimed invention over the applied references. Accordingly, as discussed during the July 21, 2005 Examiner Interview, Applicant noted that the proposed amendment to claim 1, which is set forth herein, clearly sets forth the structural limitations that distinguish the present invention, as recited in independent claim 1, over the applied references. Further, on page 7 of the Office

Action, the Examiner seems particularly concerned about the term “wound.” However, as shown in the Amendment Appendix, such term has been removed from the claim.

Accordingly, as similarly argued in the January 18, 2005 Amendment, nowhere do the applied references, either alone or in combination, teach or suggest at least, “wherein the unmelted brazing foil material is not disposed in the solder-rising preventing groove,” (emphasis added) as recited in amended claim 1. Usui ‘774, which the Examiner relies on to support the argument that the above-quoted feature is satisfied, clearly does not disclose an unmelted brazing foil material that is not disposed in the solder rising preventing groove. As previously argued, Usui ‘774 discloses that the grooves 7 thereof serve to retain the brazing material 8 (column 4, lines 24-25). In particular, the rods of brazing material 8 (i.e., unmelted material) are placed and held in each of the grooves 7 to provide an adequate degree of joining strength (col. 4, lines 18-20 and 43-45).

Also, since Usui ‘661 discloses similar features as Usui ‘774, Applicant submits that claim 1 is patentable over Usui ‘661, Shimada and Nonnenmann for at least analogous reasons as presented above. In addition, claim 1 recites that the solder-rising preventing groove prevents the melted brazing foil material from flowing toward the exhaust gas inlet side of the core. As disclosed in one embodiment of Usui ‘611, the molten brazing material is made to penetrate the entire area of contact between the metal casing 6 and the honeycomb core structure 2 to join the members. As such, the fine recesses 7 do not prevent the molten brazing material from flowing toward an exhaust gas inlet side of the honeycomb structure 2.

Further, during the July 21, 2005 Examiner Interview, the Examiner pointed to Figure 15 of Usui '611 and maintained that grooves are provided on both ends of the casing, such that if rods of material were placed on only grooves of *one* side, then the reference would still disclose the claimed features since the grooves on the opposite side of the casing would remain empty. However, Usui '611 fails to disclose that "unmelted" brazing material is disposed on one end, but not on the other end. Rather, it appears that brazing material will be placed over all grooves, and thus, does not disclose the claimed invention. Accordingly, Applicant submits that claim 1 is patentable over Figure 15 of Usui '611.

At least based on the foregoing, Applicant submits that independent claim 1 is patentably distinguishable over the applied references, either alone or in combination.

In addition, since the other applied references fail to cure the deficient teachings of Usui '774 or Usui '611, as set forth above, Applicant submits that claim 1 is patentable over the cited references.

Applicant submits that dependent claims 2, 6-8, and 10 are patentable at least by virtue of their respective dependencies from independent claim 1.

With respect to claim 8, Applicant maintains that this claim is patentable at least based on the reasons set forth in the January 18<sup>th</sup> Amendment, and thus, incorporates such arguments herein.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Application No.: 09/768,512

Attorney Docket No.: Q62804

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: August 4, 2005